Warm Up #10-3

$f(x) = 5x^3 - 3x^2 + 7x - 2$

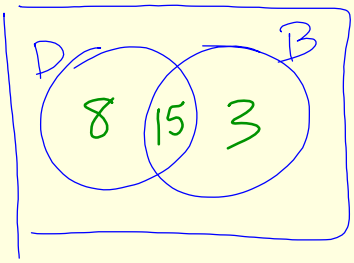
1. Find $f'(x)$

2. Find:

a) $f(2)$ b) $f'(2)$ c) $f(0)$ d) $f'(0)$

HW Questions:

#2



$n(D \cap B) = 23 + 18 - 26$

$U = 40$

$n(D) = 23$

$n(B) = 18$

$n(D \cup B) = 26$

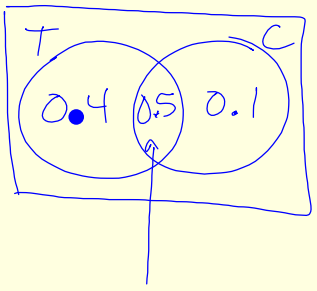
a) $\frac{15}{40} = \frac{3}{8}$

b) $P(D' \cap B')$ $\frac{14}{40} = \frac{7}{20}$

c) $P(D \cap B') = \frac{8}{40} = \frac{1}{5}$

d) $P(B|D) = \frac{15}{23}$

4 400 families were surveyed. It was found that 90% had a TV set and 60% had a computer. Every family had at least one of these items. One of these families is randomly selected, and it is found that they have a computer. Find the probability that it also has a TV set.



$$P(T \cup C) = 1$$

$$P(T) = 0.9$$

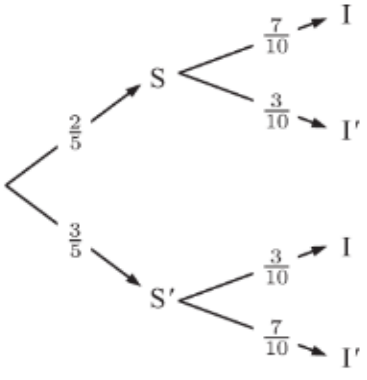
$$P(C) = 0.6$$

$$P(T \cap C) = 0.9 + 0.6 - 1$$

$$P(T \mid C) = \frac{0.5}{0.6}$$

$$= \frac{5}{6}$$

7



a $P(I) = \frac{2}{5} \times \frac{7}{10} + \frac{3}{5} \times \frac{3}{10}$

$= \frac{23}{50}$

$= 0.46$

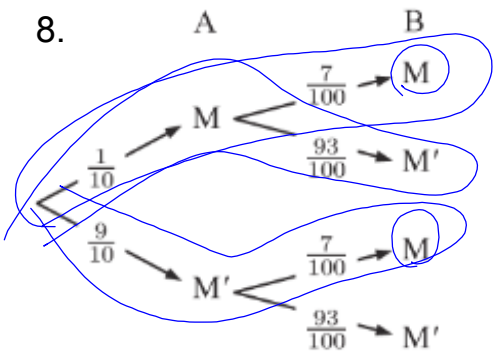
b $P(S \mid I) = \frac{P(S \cap I)}{P(I)}$

$= \frac{\frac{2}{5} \times \frac{7}{10}}{\frac{23}{50}}$

$= \frac{14}{23}$

≈ 0.609

8.



$$P(B \mid \text{at least one malfunctions})$$

$$= \frac{P(B \cap \text{at least one malfunctions})}{P(\text{at least one malfunctions})}$$

$$= \frac{\left(\frac{1}{10} \times \frac{7}{100}\right) + \left(\frac{9}{10} \times \frac{7}{100}\right)}{\left(\frac{1}{10} \times \frac{7}{100}\right) + \left(\frac{1}{10} \times \frac{93}{100}\right) + \left(\frac{9}{10} \times \frac{7}{100}\right)}$$

$$= \frac{7 + 63}{7 + 93 + 63}$$

$$= \frac{70}{163} \approx 0.429$$

Classwork:

20C p. 571, # 1 - 4

20D p. 573, # 1 - 3 and read Example 7

HW: 9J p. 293, # 9 - 12

20D p. 573, # 4 - 10